

NEW FORMS OF BUTTERFLIES FROM DUTCH NEW GUINEA.

BY J. J. JOICEY AND G. TALBOT.

The forms herein described were collected by Messrs. C., F., and J. Pratt, and details of the localities are given in the paper on *Delias*.

NYMPHALIDAE.

1. *Mynes halli* sp. nov.

Dedicated to Mr. A. Hall, a student of *Nymphalidae*, who, in his travels, has discovered several novelties.

Allied to *websteri* Smith, and distinguished by its smaller size, much reduced pale area on the fore wing and very narrow stripes on both wings below. Found together with typical *websteri*.

♂. Upper side of fore wing with basal area more greenish than in *websteri*, not reaching end of cell nor beyond vein 3, outer edge slightly incurved to submedian. Hind wing with two metallic coppery gold apical spots in 5 and 6. Dark costal area as in *websteri*, but extended distad in cellule 5. The edge of the greyish-green area more clearly defined than in *websteri* and produced on the veins, and with a narrower bluish-green edging. The narrow black distal margin is traversed along its middle by a thin bluish-green line which thickens posteriorly. Tail longer than in *websteri*.

Underside of fore wing with yellow patch at tornus as in *websteri*. Six white lines from the costa: the more proximal one ending at base of vein 2; the second slightly broken at base of vein 3 and irregular to inner margin; third narrower, beyond the cell, and joined below 2 to the fourth, which is slightly curved; fifth commencing at vein 8, above which are two short streaks, and ending in the yellow patch in cellule 2; the sixth submarginal, thickening posteriorly, and joining the yellow patch on vein 2. Inner margin white to the proximal edge of the yellow patch. Hind wing with the stripes thinner than on the fore wing. A costal line distally curved to vein 7; a short line in cell at base; a stripe from inner margin to base of 2, continued as a thin line along vein 4

nearly to the dark outer border; a subanal line from just above end of first submedian to beyond vein 3, broken at vein 2; veins 5 and 6 scaled with white to near distal border. Apical golden spots as above. Distal margin black in cellules 4, 5 and 6, bearing in 5 some bluish-green scales, in 4 a similarly-coloured spot, and in 3 a similar and smaller spot nearer the margin. The marginal area of 1c and 2 with two large golden patches divided by vein 2, bearing each a black spot at their proximal ends and with a black line at distal end, broken in the lower patch. Inner margin edged with a white line from the submedian line to end of second submedian (1b) where it is joined to a thicker white line which forms a cup-shaped extension of the ground-colour with a spot at the inner end on vein 1b; this latter line is continued indistinctly along the distal border from vein 2 to the costa, being curved outwards in 3 and again on 7. A submarginal white line from vein 7 to vein 4, parallel to the margin; a greyish-green submarginal line from 4 to 3 where it joins the edge of the golden patch.

♀. Similar to the ♂. Upperside of fore wing with pale area extended beyond cell and to vein 4, the part above vein 4 and in end of cell being grey-green, also the edge from middle of cellule 2 to the margin. Hind wing with a black distal spot in 3 and sometimes a smaller one in 4.

Underside as in the ♂, stripes a little broader.

Length of fore wing: ♂, 27 mm.; ♀, 31 mm.

Menoo River, 3,500 to 5,000 feet, November to January, six ♂♂, three ♀♀; Mount Kunupi, 6,000 feet, November and December, two ♀♀. Rare at 6,000 feet. Also one ♂ from Owgarra, British New Guinea (A. S. Meek).

AMATHUSIIDAE.

2. *Morphopsis phippii* sp. nov.

Distinct from any known species of the genus, and remarkable for the markings of the ♀ being white.

♂. Upperside of fore wing chestnut-brown in the basal half merging into the black-brown of the distal half. A postdiscal irregular band of ochraceous-orange (xv) from costa to tornus; the costal spot lying near the base of cellule 6 and divided by vein 10; the next spot more distal in 5; the next much longer distally in 4, its upper two-thirds incurved, with a small pale yellow-orange spot at its upper outer corner; next in 3 and narrow, its outer edge almost level with spot in 4, its inner edge incurved; spot in 2 narrower, constricted at the

middle, and more distal; spot below vein 2 close to margin and curved to a point on the submedian fold. A round subapical spot of pale yellow-orange in cellule 6, and sometimes a dot beyond it on 7. Inner margin strongly lobed and forming a wide angle with the outer margin at vein 2. Hind wing chestnut-brown merging into black-brown at the distal margin. A narrow marginal border of ochraceous-orange. A small ocellus in 2, slightly encroaching on veins 2 and 3, pupil black ringed with paler brown than the ground-colour and bearing a curved mark of bluish-white scales. Costal area paler with an area of grey scaling between vein 5 and the middle of cellule 7, the pale area extending slightly into cell and base of cellule 4. Costal edge strongly convex at middle and slightly incurved before the apex.

Underside fuscous, shading into black-brown, and with paler markings of hair-brown (xlv). Fore wing with band and subapical spot as above, pale yellow-orange (iii). A subapical black ocellus in cellule 5, its thin ring crossed by vein 6 and extending into cellule 4, ovate in shape but flattened on the outside where the edge is pale yellow-brown, the remainder being suffused with black-brown; the ocellus bears a curved mark of bluish-white scales. A pale marginal line, and a much thinner pale submarginal line, both commencing on the costa before the apex and running into the band posteriorly. A pale straight line cutting the cell at right angles to costa at vein 2, and proximally diffused. The submedian area paler hair-brown, inner margin darker. Hind wing with marginal border of pale yellow-orange. Two large ocelli with black pupils bearing some bluish-white scales; each ringed with two thin brown lines, and an outer much thicker brown line; costal ocellus reaching middle of cellule 4, its outer ring broken by the costa; median ocellus distally placed, its outer ring not touching vein 4 and reaching the middle of cellule 1c. In the cell two pale curved lines forming a somewhat kidney-shaped spot; a discal pale thick line from the costa to vein 1b, bordering the middle and lower discocellulars, then bent inwards to vein 2 and curving to the submedian area. Cellules 1a and 1b hair-brown. An irregular submarginal pale line from the costa on the outer ring of the ocellus to vein 1b, and touching outer ring of the lower ocellus in middle of cellules 1c and 2.

♀. Upperside bone-brown (xl) distally darker. Markings as in the ♂, but the bands a little wider, white with a faint yellow tinge.

Underside with bands as above, ground-colour a little paler than in the ♂. Fore wing ocellus more rounded. Hind wing exactly as in the ♂.

Length of fore wing: ♂, 44 mm.; ♀, 46 mm. Inner margin: (base to end of vein 2) ♂, 33 mm.; ♀, 37 mm.

Menoo River, 3,500 to 5,000 feet, December to January, three ♂♂ one ♀; November to December, one ♀; 5,000 feet, June, two ♀♀; Mount Kunupi, 3,500 to 5,000 feet, November to December, one ♂.

3. *Morphotaenaris schönbergi* Honr. *weylandensis* subsp. nov.

This forms a transition from *S. schönbergi* to *S. kenricki* Beth.-Bkr.

♂ ♀. Upperside of fore wing with the band more oblique on the upper edge in the ♂ than in *kenricki*, and reaching below the base of cell. The upper edge of cell, sometimes the basal angle, and costa black, rest of cell chestnut, and the band outside the cell kaiser-brown (xiv). Hind wing with black marginal border as in *S. schönbergi*.

Underside of fore wing with the band kaiser-brown and black reduced in the cell. No ocelli. Hind wing with apical and anal ocellus, rarely a minute one in 4, one ♀ with three additional ocelli in 3, 4 and 5. No yellowish scaling except at extreme base. Marginal black border as above.

Mount Kunupi, 4,000 to 6,000 feet, November to January; Menoo River, 3,500 to 5,000 feet, November to January, a series of both sexes. The ♂♂ were less common than the ♀♀.

SATYRIDAE.

4. *Hypocysta osyris* Bdv. *pellucida* subsp. nov.

Distinguished by the cream-coloured bands below, and the similarly coloured band of the hind wing above.

♂. Upperside with fuscous-black ground colour. Fore wing with a transverse band of a dirty yellow colour, formed by the cream-coloured band below showing through an area sparsely covered with fuscous scales. This band fades out above vein 5, outer edge clearly defined and parallel to margin, inner edge slightly entering cell, and lower edge reaching submedian. Hind wing with cream-coloured area shaped much as in *aroa*, with sharply defined edge and occupying an area as in *aroa serapis* Fruh., lower part more deeply incurved. Ocellus larger than in *osyris*, and its ring dusted with black.

Underside of fore wing with the band cream-coloured, broader than in *osyris*, and with a border of whitish hair more pronounced anteriorly and reaching vein 6. Hind wing with cream-coloured area as above but anteriorly broader. Apical ocellus as in *osyris*. Anal ocellus larger than in *osyris* and with a broader silvery ring. The

inner ring of both ocelli pale-ochreous. A submarginal silvery line and an antemarginal brown line as in *osyris*.

Kwatizore, South Geelvink Bay, February, three ♂♂; Wanggar River, 15 miles from coast, ca. 600 feet, January, one ♂.

5. *Hypocysta tenuisquamosa* sp. nov.

Distinct from any other in the genus, almost forming another group. The eyes are hairy. The hind wing with vein 6 given off at a distance from 7 about equal to the distance between 4 and 5; upper discocellular more oblique, lower discocellular at right angles to middle d.c.

♂ ♀. Upperside of fore wing with margins narrowly scaled with fuscous, submedian area thinly scaled with fuscous, rest of wing covered with minute hairs, with a sparse sprinkling of scales. The wing shows a green and purple iridescence in certain lights. Hind wing pattern somewhat as in *aroa* Beth.-Bkr. The white area does not reach the base, upper edge crossing cell, ill-defined, outer edge in line with discocellulars and shaded with fuscous scaling, lower edge from vein 5 to inner margin, incurved and sharply defined. A well-marked black ocellus in cellule 2 near margin, having a white centre dot and a faint brownish ring.

Underside of fore wing as above. Hind wing with white area sharply defined, anteriorly with a curved spur to the costa before apex, outer edge incurved to vein 5, then rounded to middle of cellule 3, with lower edge nearly straight to inner margin. A large apical ocellus, black with white centre dot, a smaller white distal dot and yellow-brown ring. A smaller ocellus in cellule 2, black with white centre dot, a thin yellow-brown ring edged with black, and an outer ring of metallic silvery-blue extending into cellules 1c and 3. A thick antemarginal silvery-blue line from above the apical ocellus to the second submedian.

Head, thorax, abdomen and appendages marked as in other forms of *Hypocysta*.

Length of fore wing: ♂, 21 mm., ♀, 23 mm.

Dewaro Village, 3,500 feet, June, six ♂♂, two ♀♀; Wai Sai River, 1,000 feet, June to July, two ♂♂, two ♀♀.

6. *Platypthima dispar* sp. nov.

Allied to *euptychioides* J. and T. from the Wandammen Mountains, and easily distinguished by the large ocellus in cellule 3 of the hind wing below. *P. euptychioides* occurred together with *dispar*.

♂ ♀. Upperside without markings as in *euptychioides*.

Underside with ground colour fuscous-black. Fore wing a little paler on distal and costal margins, more so on the inner margin, inner edge of pale distal area parallel with the margin. A dark submarginal line nearly parallel to margin, and a well-marked antemarginal line reaching vein 2. Hind wing with a band of five ocelli bordered with bluish silvery-white, this edging being wider on the distal side than in *euptychioides*. Anterior ocelli in 5 and 6 equal in size, the one in 4 smaller than the others, the one in 3 larger than the others, the one in 2 larger than the first 3. All ocelli with black pupil and white centre dot, a yellow-brown iris, and a broader edging of paler yellow-brown which joins up the series. The silvery border with a proximal border of reddish-brown entering end of cell, and marked in cellules 1c and 2 with some bluish silvery-white scaling. A white dot in 7 placed well proximal of the first ocellus.

Length of fore wing: ♂ ♀, 21 mm.

Mount Kunupi, 6,000 feet, December to January, two ♂ ♂ ; Dewaro Village, 3,500 feet, June, four ♂ ♂ , one ♀ (types).

7. *Pieridopsis virgo* R. and J.

Form *obscurata* f. nov.

This corresponds to the ♀ specimen described by Roths. and Jord. Nov. Zool. xii, p. 458, 1905. We have both sexes of this form. Some specimens are quite without yellow markings on the hind wings below. In two specimens the hind wing above has a heavier dark margin, wider between veins 2 and 4.

Form *opaca* f. nov.

♂ ♀. Upperside as in *virgo*. Hind wing with heavy black marginal border, wider between veins 2 and 4.

Underside of fore wing as in *virgo*. Hind wing with bands obscured posteriorly by a fuscous-black shade, leaving the anterior halves or less of each band, with band of ocelli as in *obscurata*, and edged with a narrower border of white along each side.

Form *infuscata* f. nov.

♂. Upperside of fore wing with white area not entering cell, but forming a broad stripe on the inner margin, reaching slightly above vein 2.

Underside of fore wing with inner marginal stripe not reaching vein 2. Costal bar and distal stripe alone remaining of the white area in *virgo*. Hind wing as in *virgo*.

The series of this species obtained by Messrs. Pratt is very interesting, and is constituted as follows:—

P. virgo virgo R. and J.

Mount Kunupi, 6,000 feet, November to January, sixteen ♂♂, fifteen ♀♀.

P. virgo f. *obscurata* J. and T.

Mount Kunupi, 6,000 feet, November to January, eleven ♂♂, seven ♀♀.

P. virgo f. *opaca* J. and T.

Mount Kunupi, 6,000 feet, November to January, six ♂♂.

P. virgo f. *infuscata* J. and T.

Mount Kunupi, 6,000 feet, November to January, two ♂♂; Mount Goliath, S. Dutch New Guinea, 5,000 to 7,000 feet, February, 1911, A. S. Meek, one ♂.

There seems little doubt that we have here a single species, which may not even be racially distinct in British and Dutch New Guinea. These are essentially mountain insects, and in course of time, it is conceivable that one or other of the forms mentioned may supplant the others and constitute a separate race.

ERYCINIDAE.

8. *Dicallaneura longifascia* sp. nov.

Allied to *ekeikei* Beth.-Bkr., from the Owen Stanley range, agreeing with this species in the white areas of both wings, and in the long white stripe on the hind wing below.

♀. Upperside fuscous-black (xlvi). Fore wing with a broad white band anteriorly narrow in cellules 6, 9 and 10, outer edge curving outwards from vein 6 to near the margin on veins 2 and 3, and ending on the inner margin before the tornus; inner edge of this band less sharply defined, straight from base of vein 11 across the middle of discocellulars to below base of vein 2, thence curved outward to the submedian, and slightly incurved to the margin. Fringe white from apex to middle of cellule 4.

Hind wing with a distal costal white patch, sharply defined, inner edge oblique from costa to middle of cellule 4, thence slightly oblique to vein 4 near its middle; outer edge from just before the apex to vein 4, slightly indented. A round white spot in 3 placed at about a third the length of the cellule from the margin. Fringe white from vein 6 to submedian (?); wings of the specimen torn from anal angle to vein 3.

Underside fuscous-black, basal area more fuscous. Fore wing with white band as above. A curved white mark crossing the cell at the middle. A white spot at extreme base. A small white spot in cellule 9, a short streak below it in 8, and a smaller spot below this in 6, all placed just beyond outer edge of band. A curved row of submarginal white spots in cellules 2 to 8, the one in 6 the larger, the one in 2 linear, close to edge of band. Two white apical spots in 6 and 7, the lower the larger. Hind wing with a white costal patch and round spot in 3 as above. A smaller white spot in 2. A thick white longitudinal stripe from the base, its upper edge oblique to base of vein 2 and along this vein shortly, lower edge just below cell, meeting upper edge in a point on vein 2; some further white scaling along veins 2 and 3 and edge of cell to vein 3; discocellulars thinly outlined with white. A curved white submedian stripe from the inner margin at base nearly to vein 2, its edges irregular, more so the lower edge. A second slightly curved and narrow white stripe, placed near the margin from the anal angle to vein 2. A narrow marginal ochraceous-tawny (xv) band from vein 5 to the anal angle, crossed by a white line broken up into spots at the veins, this again edged by a deep black line similarly broken up. The fringe broken by fuscous-black at end of veins 4 and 5, the rest of the margin being damaged in this specimen.

Head, thorax, and base of abdomen above fuscous. Antennae black. Eye edged with white except above. Palpi and side of frons white. Fore-legs with femora white, rest pale ochreous; other legs absent in this specimen. Pectus white. Abdomen pale ochreous on ventral surface, and with a subventral ochreous-tawny stripe.

Length of fore wing: 23 mm.

Nomnagihé, 2,000 feet, January to February, one ♀.

9. *Praetaxila poultoni* sp. nov.

Allied to *eromena* Jord., from the Snow Mountains, and differing in the much restricted orange area in the ♂ and in the larger white patch on the hind wing of ♀.

♂. Upperside with black-brown ground-colour and orange bands. Fore wing with a discal band from 4 to 5 mm. wide, sharply defined at the edges, not touching costa, slightly entering end of cell, crossing base of cellule 3 or not reaching it, outer edge curved from vein 3 to submedian, where the band is narrower than at costa. At base of wing some chestnut-brown scaling. Hind wing with a broad discal band, inner edge diffused below the cell and not entering the cell; outer

edge sharply defined and curved slightly outwards; anteriorly the band reaches the middle of cellule 4, and posteriorly the inner margin where it is most yellow in colour.

Underside fuscous-black. Fore wing fuscous in the apical and distal area. Band as above but sea-shell pink (xiv). Two white dots at apex in cellules 6 and 7. Hind wing band sea-shell pink, anteriorly limited by vein 4, edges sharply defined; distal and posterior part of band with orange spots on the veins, a streak on the submedian, and along the inner margin. Two white apical dots in 4 and 5. A submarginal row of five white dots, two in 1c and others in 2, 3 and 4.

Head fuscous-black; a white line round the eye, broken above; a white dot at base of antenna, on the inside; palpi orange; antenna black. Thorax chestnut-brown above, black beneath. Legs fuscous-black above, except fore legs, which have the femur and tibia orange. Abdomen chestnut above and laterally, orange-yellow ventrally.

♀. Upperside with fuscous-black ground-colour, and white bands. Fore wing with band broader than in the ♂, entering lower angle of cell and not reaching the submedian, its edges sharply defined but irregular, the part below vein 2 with inner edge more distal than in the other. Hind wing with broader band than in the ♂, somewhat as in *eromena*, but entering cell to beyond vein 2, and anteriorly narrowing to beyond vein 5, with either a spot reaching vein 6, or some white scaling in cellule 5; a slight yellow tinge on the outer edge of the band in cellule 1b.

Underside with ground-colour as in ♂. Fore wing band a little broader. Two white dots in 4 and 5, just within the pale distal shade, a white dot in 6 near the margin. Hind wing band as above; white dots as in the ♂ but larger, and another white dot in 3 joined to the edge of the band.

Fore legs with femur and tibia slightly tinged with yellow-brown. Abdomen fuscous, ventral surface white tinged with yellow.

Length of fore wing: ♂, 25 mm.; ♀, 28 mm.

Wanggar River, 15 miles from coast, ca. 600 feet, January to February, five ♂♂, seven ♀♀; Nomnagihé, 2,000 feet, January to February, four ♂♂, six ♀♀.

P. poultoni was found flying with the Agaristid *Immetalia saturata longipalpis* Kirsch. This species has a white-banded ♂ and an orange-banded ♀.

A note on this mimetic association is contributed by Professor Poulton to the present volume.

The ♀ of *P. poultoni* was found feeding on tree gum.

10. *Praetaxila tyrannus* Sm. *segestes* Jord. ♀.

Abisara segestes Jord., Nov. Zool. xi, p. 45 (1904) (Dutch New Guinea, probably East of Geelvink Bay).

♀. Upperside of fore wing with cellspot reduced to a dot or obsolete. Median spot mostly reaching below vein 2. Hind wing as in *t. tyrannus* Sm., with or without two apical spots in 4 and 5.

Underside as in *t. tyrannus*, but without any yellowish or tawny scaling. The discoidal spot of the fore wing is prolonged distad in two out of four specimens.

Wanggar River, 15 miles from coast, ca. 600 feet, January, seven ♂♂, one ♀ (neallotype); Wanggar, February, one ♀; Kwatigore, February, three ♂♂; Nomnagihé, 2,000 feet, June, one ♀.

This race is separated by Fruhstorfer in Seitz, but is very close to the typical Waigeu form and may have to sink if material from Waigeu should prove otherwise.